

09/672050

ABSTRACT

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Multiple operational parameters for a laser device are simultaneously controlled, optimized and/or stabilized by a software-based system with nested and interactive feedback control loops. Start-up mode, channel lock mode and channel change mode operations are described. The invention may be applied to a laser device with monolithic DBR tuning and gain sections, and also to systems with separate amplifiers. An optical filter system for normalizing-out changes in output power in relation to wavelength control is also disclosed.